

and do not admit of abridgment, but the following are the results as summed up by the author.

1. That the annual ratio of deaths from fever in London, have decreased since the commencement of the 18th century.
2. That the susceptibility to be attacked by fever is greatest among individuals under 10 years of age, and from 20 to 30.
3. That the period of life during which the highest ratio of mortality occurs from fever is from 40 to 50.
4. That there is no very apparent difference in regard to one sex being more susceptible to fever than the other.
5. That the annual ratio of deaths by fever is nearly twice as great among the male as the female population.
6. That there is about 1 death for every 15 persons attacked by fever.
7. That the intensity of fever increases with the age of the patient about 34 per cent. every decennial advance in life.
8. That attacks of fever are one-third more intense among males than females.
9. That fever is most prevalent from July to December inclusive.
10. That the intensity of fever is much greater during January, February, March, April, and May, than at any other part of the year.
11. That during those months fever is most prevalent, the temperature and quantity of rain is considerably greater than during those months fever is not so prevalent.
12. That during those months fever is most intense, the temperature and quantity of rain is comparatively low.
13. That medical treatment has a powerful effect in lessening the danger or number of deaths from fever.
14. That early medical treatment shortens the duration of fever.
15. That the mean duration of fever among individuals under 40 is shorter than among those above that period of life.
16. That the general prognosis of fever is favourable, there being 14 chances to 1 that the patient will recover.
17. That the prognosis of fever becomes less favourable as the patient is advanced in life, the intensity of the disease being nearly twice as great at 41 years of age as at twenty-one.
18. That the prognosis of fever is one-third more favourable among females than males.
19. That the prognosis of fever is more favourable from June to December, than from January to June.
20. That the prognosis of fever is one-half more favourable among patients who come under medical treatment before the 7th day of the disease, than those who are admitted at a later period.
21. That the prognosis of fever is unfavourable when there are cerebral or thoracic complications.
22. That the second week of fever is the most dangerous.

Out of 1000 cases passing through this week 82 died.

62. *Proportion of the Sexes at birth in legitimate and illegitimate children.* The fact of there being born a greater number of male than of female children is a curious and inexplicable one, but it is still more curious that the number of males is greater among children born in wedlock than among illegitimate children. In France, it appears from the registers of fifteen years from 1817 to 1831, which embrace more than ten millions of births, the absolute proportion of boys to girls is, 106.5 of the former to 100 of the latter. In the legitimate children the proportion is 106.7 boys to 100 girls; and among the illegitimate children 104.8 boys to 100 girls. The results are the same in Austria, Prussia, Sweden Wurtemberg, and Bohemia as in France, as is shown by the statements published by Professor Bernouilli of Basle.

The list of births and deaths in Berlin for the month of March, 1838, exhibit the same fact. Thus there were born this month 875 infants, of which 472 were boys and 403 girls. The number of illegitimate births were 129, of which 68 were girls and 61 boys.—*Bulletin Général de Thérapeutique*, August, 1838.

#### ANIMAL CHEMISTRY.

63. *Presence of Quinine in the Urine of persons who had taken it in large doses.*—The presence of quinine in urine was first detected by M. Lavallee, in 1836. More recently, (May, 1838,) M. QUEVÈNNE detected this substance in the urine

of a patient affected with malignant intermittent fever, to whom it had been given in large doses.—*Bull. Gén. M. Thérap.* Aug. 1838.

64. *Analysis of the blood of a diabetic patient—detection of sugar in it.*—Until very recently it was supposed that the serum, even in the most violent and lengthened cases of diabetes, did not contain any sugar. Some late experiments of Mr. M'Grigor, of Glasgow, seem to show, however, that sugar is present, not only in the blood and urine, but also in several secretions and excretions. Ambrosiani says he has succeeded in separating sugar from the serum of diabetic blood in a crystallizable state.

Dr. G. O. REES, in an interesting article in *Guy's Hospital Reports* for October, 1838, has given a process by which he has obtained sugar of considerable purity from the serum of a diabetic patient. The process is as follows:—"The mass of blood\* is to be evaporated to dryness, over a water bath; the dried mass to be comminuted and digested for several hours in boiling water; the aqueous solution is to be filtered off, evaporated to dryness, and the dried residuum digested in alcohol of sp. gr. 0.825; the alcohol solution thus formed is to be filtered, or carefully poured off, evaporated to dryness, and the dry mass treated several times with rectified ether, which dissolves out urea, and also some fatty matter, leaving behind the sugar, in admixture with osmazome and chloride of sodium; this mass, on being dissolved in alcohol, and the solution allowed to evaporate spontaneously in a flat glass dish, affords mixed crystals of alkaline chloride and diabetic sugar; which are easily distinguishable from each other, and allow of being separated mechanically, by shaking them up in alcohol, when the chloride sinks; and the sugar, being principally collected above, may be removed for examination by careful use of the spatula; the alcohol must not, of course, be allowed to remain long in contact with the crystals, as it would re-dissolve them.

The following is the analysis of 1000 grains of diabetic serum obtained for Dr. Rees by Dr. Bright. The sp. gr. of this patient's urine was 1048; and the contents of the serum as follows:

Water	-	-	-	-	-	-	90.850
Albumen (yielding traces of phosphate of lime and oxide of iron, on incineration)	-	-	-	-	-	-	80.35
Fatty matters	-	-	-	-	-	-	0.95
Diabetic sugar	-	-	-	-	-	-	1.80
Animal extractive, soluble in alcohol, urea	-	-	-	-	-	-	2.20
Albuminate of soda	-	-	-	-	-	-	0.80
Alkaline chloride, with traces of phosphate	}						4.40
Alkaline carbonate, and traces of sulphate, the results of incineration							
Loss	-	-	-	-	-	-	1.00
							1000.00

Dr. Rees would wish the proportion of diabetic sugar given above to be considered merely in the light of a close approximation, as it is impossible to separate it completely from impurity; and, moreover, the loss sustained by it during manipulation, which must be considerable, does not admit of estimation.

It will be observed, on comparing this analysis with that of the serum of healthy blood, that we have here a great excess of matters soluble in alcohol, while the albuminate of soda is rather less than in health. The alkaline salts are also very small in proportion, being only 4.40 grs. in 1000 grs. of serum while in health they amount to from 7 to 8 grs. per 1000.

\* 12 ounces were used in his experiments.